

UDC 616.12-78-07:616.155.18(047)

USSR

KOMAROV, L. S., and SHUL'MAN, K. M., Joint Laboratory of Artificial Heart and Valve Prostheses; Scientific Research Institute of Clinical and Experimental Surgery; Ministry of Health USSR, and Institute of Cardiovascular Surgery imeni A. N. Bakulev, Academy of Medical Sciences, USSR

"The Problem of Blood Trauma during the Operation of an Implanted Artificial Heart"

Moscow, Grudnaya Khirurgiya, Vol 12, No 3, May/Jun 70, pp 87-91

Abstract: The characteristics of anemia resulting from the traumatic effect on red blood cells (RBC) of cardiac prostheses, especially in cases of implantation of artificial valves, were discussed. Fragmentation of RBC results in an increase in free plasma hemoglobin, and an increase in levels of erythropoietic and leukopoietic elements in bone marrow, indicating the presence of a hemolytic factor in anemia. "Aging" of RBC ($T_{1/2}$) occurs, which accounts for the continuance and aggravation of anemia. Of the materials from which artificial valves are made, stainless steel is the best. There are numerous new promising developments in plastics, but they are still in the experimental stage. Regardless of the material, the most important factor is the smoothness of the prosthetic valve implanted in the heart.

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SHALLIMAN, M.G.

Recording devices

ENCLOSING DATA		L. Page No. JPRS 59611		3	
Subject		LHM VK-1/2 TYPE SMALL VIDEO TAPE RECORDER		3	
1. Name of Person or Organization		M. G. Shalliman, V. A. Korlin, Ye. N. Nikonov, et al.		3	
2. Address		1990 North Glebe Road Arlington, Virginia 22201		3	
3. Telephone Number		As above		3	
4. Title of Report		TEKHNIKA KINO I TELEVIDENIYA, No 1, 1972, Moscow		3	
5. Date of Report		The report contains a description of the LHM VK-1/2 type video tape recorder.		3	
6. Author		USSR Methods and Equipment Recording Devices Video Tape Recorder		3	
7. Medium (Specified Terms)		1/2 inch video tape		3	
8. Classification		1/2 inch video tape		3	
9. Availability		1/2 inch video tape		3	
10. Remarks		1/2 inch video tape		3	
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86. Remarks		1/2 inch video tape			

1/2 010 UNCLASSIFIED
TITLE--GEL SORBENTS FOR ENZYME PURIFICATION -U-
AUTHOR--(04)-ILIN, V.A., SHULMAN, M.S., PASHKOV, A.B., SAMBORSKIY, I.V.
COUNTRY OF INFO--USSR
SOURCE--PRIKL. BIOKHM. MIKROBIOL. 1970, 6(3), 289-96
DATE PUBLISHED-----70
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--AMYLASE, DEXTRAN, GEL
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY FICHE NO----FD70/605004/C07 STEP NO--UR/0411/70/006/003/0289/0296
CIRC ACCESSION NO--AP0139620
UNCLASSIFIED

UNCLASSIFIED

PROCESSING DATE--04DEC70

2/2 010

CIRC ACCESSION NO--AP0139620

ABSTRACT/EXTRACT--(U) GP-0-

ABSTRACT. GELS WERE OBTAINED FOR EXTG.

AMYLASE FROM ORIZIN PC PREPNS. THE CONDENSATION OF DEXTRAN (I) WITH

EPICHLOROHYDRIN OLIGOMER (II) (A. F. CHETVERIKOV, ET AL., 1970), I WITH

II AND POLYETHYLENE POLYAMINE (III), OR I, II, AND III FOLLOWED BY THE

REACTIONS WITH BZCL, DINITROCHLOROBENZENE, OR FURFURAL GAVE GELS WITH

ADSORBENT AND ION EXCHANGE CHARACTERISTICS. THE EFFECTS OF THE GEL

COMPON. ON ITS ION EXCHANGE, ADSORPTION, AND SWELLING PROPERTIES WERE

DETD. THE GELS WITH LOWERED N BASICITY WERE BEST FOR THE EXTN. OF

AMYLASE.

FACILITY: RES. INST. PLAST., MOSCOW, USSR.

UNCLASSIFIED

UDC: 53.082.52

USSR

BOGOMOLOV, V. N., ~~SHUL'MAN, S. G.~~, Physicotechnical Institute imeni A. F. Ioffe, Academy of Sciences of the USSR

"Using Tubular Indium Antimonide Single Crystals for Low-Voltage Current Converters"

Moscow, Izv. AN SSSR: Ser. Fizicheskaya, Vol 36, No 3, Mar 72, pp 529-530

Abstract: The authors discuss the electrical properties of low-voltage electric current converters (inverters and rectifiers) based on tubular single crystal indium antimonide magnetoresistors. High conversion efficiency is obtained by making the devices in the form of Corbino disks cut from tubular single crystals grown by the Stepanov method. It is pointed out that the efficiency could be increased to as much as 90% by using metals with higher electron mobility than InSb at low temperatures, such as bismuth, gallium and indium.

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UDC 621.318.5

USSR

Dr. of Physico-Mathematical Science RABKIN, L.I., Engineers LEYZAN, L.I.,
SHUL'MAN, S.M., VASIL'YEV, A.S.

"Relay Based On Magneto-Controlled Contacts With Use Of Ferroelast"

Moscow, Pribory i sistemy upravleniya, No 11, Nov 1971, pp 32-33

Abstract: It is concluded that Type FNTs ferroelast is a promising magneto-dielectric material which will find wide use in switching technology, particularly in relays based on magneto-controlled contacts. The parameters of Type FNTs-17 ferroelast are presented. Use of ferroelast makes it possible to increase the sensitivity of the relay, to decrease its dimensions and consumable power. Subsequent work must be conducted in the direction of increasing the thermal stability, the insulation strength, and improvement of the magnetic and elastic properties of the ferroelast which in addition will make it possible to expand the range of its application. 6 ref. 1 fig. 2 tab.

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USSR

UDC 621.3.049.002.5

SHUL'MAN, V. A., TUMANYAN, G. Ye.

"A Method of Making Foil-Covered Printed-Circuit Boards"

Moscow, Otkrytiya, izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, No 8, Mar 71, Author's Certificate No 296293, division H, filed 28 Jun 68, published 12 Feb 71, pp 199-200

Translation: This Author's Certificate introduces a method of making foil-covered printed-circuit boards which is based on gluing together a dielectric substrate and metal foil, punching the foil and the substrate, and creating a metal layer on the inner surface of the holes in the substrate. As a distinguishing feature of the patent, in order to improve the reliability of connections between conductors located in different layers of multilayered boards, the foil and substrate are punched separately, the hole in the foil being made smaller in diameter than that in the substrate, and the metal layer on the inner surface of the holes in the substrate is produced in the process of cementing the foil and substrate, by pressing the foil into the holes in the substrate at points where contact areas are located.

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UDC 669.15*28.26.25.24:621.78

USSR

SHAKHNAZAROV, YU. V., ANISIMOVA, M. S., BARAKHTIN, B. K., and SHUL'MAN, Y. M.;
Leningrad

"The Stabilization of Austenite with Inverse Conversion in Cr-Co-Mo and Cr-Ni-Co-Mo Steels"

Moscow, Izvestiya Akademii Nauk SSSR, Metally, No 2, Mar-Apr 73, pp 160-163

Abstract: The stabilization of austenite was investigated with inverse conversion in Kh15K19M3 steel not containing Ni, and in Ni-containing Kh14K14N4M3 steel, both smelted in one-ton vacuum arc furnaces. The effect of the aging temperature on characteristic factors as the quantity of residual austenite, electric resistance, period of α -phase lattice, impact ductility, and hardness, is discussed by reference to diagrams. The lowered stability of austenite, developing on initial stages of $\alpha \rightarrow \gamma$ conversion according to the shifting mechanism, indicate a low contribution of phaseal peening to the stabilization effect. The maximum stability results with the development of $\gamma \rightarrow \alpha$ conversion, which becomes possible by a significant redistribution of elements. Considering the increased solubility of Mo in martensite at decreasing Co content, it can be assumed that the stabilization of austenite in steel not containing Ni is in presence of Cr, determined by γ -phase concentration with Co. Three figures, eight bibliographic references.

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1/2 019 UNCLASSIFIED PROCESSING DATE--30OCT70
TITLE--COMPLEXES OF COPPER I, SILVER I, AND GOLD I CHLORIDES WITH
SELENOUREA -U-
AUTHOR--(03)-VARAND, V.L., SHULMAN, V.M., KHLYSTUNOVA, E.V.
COUNTRY OF INFO--USSR
SOURCE--IZV. AKAD. NAUK SSSR, SER. KHIM. 1970, (2), 450-2
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--COPPER COMPLEX, SILVER COMPOUND, GOLD COMPOUND, ORGANOSELENIUM
COMPOUND, UREA, COMPLEX COMPOUND, IR SPECTRUM
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1997/0638 STEP NO--UR/0062/70/000/002/0450/0452
CIRC ACCESSION NO--AP0119550
UNCLASSIFIED

UNCLASSIFIED

PROCESSING DATE--30OCT79

2/2* 019

CIRC ACCESSION NO--AP0119550
ABSTRACT/EXTRACT--(U) GP-0-

ABSTRACT. TREATING 60 ML 0.04M CUCL SUB2 WITH COOLING WITH 50 ML 0.2M SELENOUREA IN NHCL GAVE INITIALLY A VIOLET PPT. WHICH DISSOLVED AND DEPOSITED A COLORLESS COMPLEX WITH CU SUB2 CL SUB2, 2SEC(NH SUB2) SUB2.2CUCL, ALONG WITH FORMATION OF (SECNH SUB2:NH) SUB2. REACTION OF SELENOUREA WITH AGCL GAVE AGCL.2SEC(NH SUB2) SUB2. HAUCL SUB4 AND SELENOUREA (4 MOLES) REACTED IN AQ. HCL BORAX TO FORM COLORLESS AUCL.2SEC(NH SUB2) SUB2. THE IR SPECTRA OF THE PRODUCTS INDICATED THAT THE SELENOUREA BONDS TO THE METAL VIA THE SE ATOM.
FACILITY: INST. NEORG. KHIM., NOVOSIBIRSK, USSR.

UNCLASSIFIED

1/2 010 UNCLASSIFIED PROCESSING DATE--16OCT70
TITLE--OXIDATION REDUCTION POTENTIALS OF FORMAMIDINE DISULFIDE THIOUREA
AND CERUM(IV) CERUM(III) SYSTEMS IN AQUEOUS ACETIC ACID SOLUTIONS -U-
AUTHOR--(04)-ZEGZHDA, T.V., LAVRENOVA, L.G., SHULMAN, V.M., USTYANTSEVA,
T.A.
COUNTRY OF INFO--USSR
SOURCE--ELEKTROKHIMIYA 1970, 6(3), 442-4
DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--REDOX REACTION, FORMIC ACID, THIOUREA, SULFIDE, PLATINUM
ELECTRODE, CERUM COMPOUND

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1994/0195

STEP NO--UR/0364/70/006/003/0442/0444

CIRC ACCESSION NO--APO114581

UNCLASSIFIED

2/2 010

UNCLASSIFIED

PROCESSING DATE--16OCT70

CIRC ACCESSION NO--AP0114581

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE REDOX POTENTIAL IN A CELL
CONTG. FORMAMIDINE DISULFIDE ((H SUB2 NC (:NH)S) SUB2) THIOUREA AND N
HCL AND 0-90PERCENT ACOH WAS MEASURED AT 25DEGREES WITH A PT AND GLASS
ELECTRODES AND COMPARED WITH A CELL CONTG. CE PRIME4 POSITIVE:CE PRIME3
POSITIVE (AS SULFATES), N HCL, AND 0-80PERCENT ACOH. THE POTENTIAL OF
THE FORMAMIDINE DISULFIDE THIOUREA SYSTEM IS PRACTICALLY INDEPENDENT OF
THE SOLVENT COMPN. THE DATA FOR BOTH SYSTEMS ARE IN GOOD AGREEMENT WITH
THOSE OBTAINED WITH THE SCE AND PT ELECTRODES. FACILITY: INST.
NEORG, KHIM., NOVOSIBIRSK, USSR.

UNCLASSIFIED

UDC 632.95

USSR

ARNOL'DOV, Ye. M., MITYAKINSKIY, V. I., GLADILIN, I. N., YAKUBA, A. R.,
KOSTITSIN, B. A., KIYASHKO, V. K., KAZ'MIN, M. F., SHUL'MAN, V. N.

"A Method of Making the Discharge Form of Copper 2,4,5-Trichlorophenoxide"

USSR Author's Certificate No 345121, filed 14 Feb 69, published 9 Aug 72
(from RZh-Khimiya, No 9, May 73, abstract No 9N509P by T. G. Chekareva)

Translation: A method is proposed for making a commercial form of copper, 2,4,5-trichlorophenoxide (I) used in making poisons. A wet paste of compound I is filtered, pressed to a moisture content of 50-55%, loaded into a crank mixer, and mixed with talc and kaolin in a ratio of 1:1:2 respectively. The mixture is agitated for 1-2 hours. It is then loaded as a powder containing 16-20% moisture into a drier with a fluidized bed of inert material. The degree of moisturizing of the dry product in the cyclone is of the order of 96-97%.

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1/2 020 UNCLASSIFIED PROCESSING DATE--30OCT70
TITLE--MORPHOLOGICAL INVESTIGATION OF THE MUCOUS MEMBRANE OF THE DUODENUM
IN CHRONIC HEPATITIS AND CIRRHOSIS OF THE LIVER -U-
AUTHOR--SHULMAN, V.SH.

COUNTRY OF INFO--USSR

SOURCE--KLINICHESKAYA MEDITSINA, 1970, VOL 48, NR 6, PP 77-82

DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--MORPHOLOGY, DUODENUM, HEPATITIS, LIVER, CIRRHOSIS, DIAGNOSTIC
METHODS

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--3002/1789

STEP NO--UR/0497/70/048/006/0077/0082

CIRC ACCESSION NO--AP0129157

UNCLASSIFIED

2/2 020

UNCLASSIFIED

PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0129157

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. BY COMPARING THE FREQUENCY OF COINCIDENCES IN THE DETERMINATION OF THE ACTIVITY OF THE PATHOLOGICAL PROCESS IN CHRONIC HEPATITIS AND LIVER CIRRHOSIS, ACCORDING TO DATA OF MORPHOLOGICAL STUDY OF THE LIVER, BIOCHEMICAL AND HISTOCHEMICAL TESTS OF THE EPITHELIUM OF THE DUODENAL MUCOUS MEMBRANE (26 PATIENTS, 153 OBSERVATIONS) THE AUTHOR ARRIVED AT THE INTERFERENCE ON THE POSSIBILITY OF USING THE LATTER METHOD AS AN ADDITIONAL CRITERION IN THE DIAGNOSIS OF THE PROCESS ACTIVITY. IT IS DEEMED MOST EXPEDIENT TO USE THIS METHOD FOR DYNAMIC OBSERVATION OVER PATIENTS WITH CHRONIC HEPATITIS AND LIVER CIRRHOSIS RECEIVING GLYCOCORTICIDS. FACILITY: KAFEDRA VNU TRENNIKH BOLEZNEY NO 2 I MORFOLOGICHESKIY OTDEL TSENTRAL'NOY NAUCHNO-ISSLEDOVATEL'SKIY LABORATORII LENINGRADSKOGO SANITARNO-GIGIYENICHESKOGO MEDITSINSKOGO INSTITUTA.

UNCLASSIFIED

1/3 014 UNCLASSIFIED PROCESSING DATE--13NOV70
TITLE--SITUATION WITH TAENIARHYNCHOSIS, HOOKWORM DISEASES AND ASCARIDIASIS
IN TRANSCAUCASIAN REPUBLICS AND MEASURES NECESSARY FOR ERADICATION AND
AUTHOR--(05)--POPOV, V.F., SHULMAN, YE.S., PROKOPENKO, L.I., ABRAMOVA, I.G.,
LOPUKHINA, N.G.
COUNTRY OF INFO--USSR
SOURCE--MEDITSINSKAYA PARAZITOLOGIYA I PARAZITARNYYE BOLENI, 1970, VOL
39, NR 2, PP 180-188
DATE PUBLISHED--70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--DISEASE CONTROL, PARASITE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1990/1419

STEP NO--UR/0358/70/039/002/C180/0188

CIRC ACCESSION NO--AP0109481

UNCLASSIFIED

2/3 014

UNCLASSIFIED

PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AP0109481

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE DECREE OF THE USSR MINISTRY OF PUBLIC HEALTH NO. 230 OF MARCH 20, 1967 PROVIDES FOR A NUMBER OF MEASURES FOR INCREASING THE PACE OF ERADICATION AND REDUCTION OF INCIDENCE OF A NUMBER OF INFECTIOUS AND PARASITIC DISEASES IN THE SOVIET UNION. FROM YEAR TO YEAR THE RANGE OF EXAMINATIONS OF THE POPULATION FOR DETECTION OF HELMINTHIC DISEASES INCREASES IN THIS COUNTRY. THE AMOUNT OF WORK DONE FOR CONTROL OF HELMINTHIC DISEASES HAS INCREASED SIGNIFICANTLY IN REPUBLICS OF THE TRANSCAUCASUS WHICH, ALONGSIDE WITH INCREASING OF MATERIAL WELFARE OF THE PEOPLE, IMPROVEMENT OF THEIR SANITARY CULTURE, CONTINUOUSLY IMPROVING SANITARY CONDITIONS OF INHABITED AREAS RESULTED IN 1967 IN 2.1 FOLD REDUCTION IN THE INCIDENCE OF HELMINTHIC DISEASES IN THE POPULATION OF THE AZERBAIJAN AND THE ARMENIAN SSR, AND 2.8 FOLD REDUCTION IN THE GEORGIAN SSR AS COMPARED WITH THE LEVEL OF INCIDENCE IN 1950. EVEN THOUGH AS A RESULT OF MUCH WORK DONE IN SANITATION OF THE POPULATION FROM TAENIARHYNCHOSIS AND ASCARDIASIS THE INCIDENCE OF THESE HELMINTHIC DISEASES HAS BEEN REDUCED SEVERAL TIMES, IT IS STILL MUCH HIGHER THAN THE AVERAGE INDEX FOR THE SOVIET UNION. THE INCIDENCE OF HOOKWORM DISEASES IN THE POPULATION OF THE AZERBAIJAN SSR AND PARTICULARLY OF THE GEORGIAN SSR IN 1967 ALSO REDUCED SEVERAL TIMES AS COMPARED WITH THAT IN 1959, BUT ERADICATION OF THIS HELMINTHIC DISEASE REQUIRES STILL MUCH WORK TO BE DONE.

3/3 014

UNCLASSIFIED

PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AP0109481

ABSTRACT/EXTRACT--THE MAIN CONDITIONS FOR ERADICATION AND REDUCTION OF THE INCIDENCE OF HELMINTHIC DISEASES IN THE TRANSCAUCASIAN REPUBLICS INCLUDE, FIRST OF ALL, IMPROVEMENT IN THE ORGANIZATION OF HELMINTHIC DISEASE CONTROL MEASURES WITH ENLISTING OF COOPERATION OF THE GENERAL MEDICAL NETWORK, IMPROVEMENT IN THE GUIDANCE OF THIS WORK ON THE PART OF PUBLIC HEALTH MINISTRIES AND CHIEF PHYSICIANS OF DISTRICTS, DETECTION AND SANITATION OF ALL PATIENTS WITH TAENIARHYNCHOSIS, PARTICULARLY AMONG CATTLE BREEDERS, INTRODUCTION OF LABELLING AND VITAL DIAGNOSIS OF MEASLES IN CATTLE IMPROVEMENT OF VETERINARY AND SANITARY CONTROL IN PLACES OF CATTLE SLAUGHTER, MARKED IMPROVEMENT IN THE SANITARY CONDITIONS OF VILLAGES AND CATTLE BREEDING FARMS, IMPROVEMENT OF SANITARY EDUCATION OF THE POPULATION, DETECTION AND SANITATION OF ALL MICROFOCI OF HOOKWORM DISEASES, SANITATION OF MICROFOCI OF ASCARIDIASIS PARTICULARLY IN INTENSIVE FOCI. FACILITY: GLAVNOYE SANITARNO-EPIDEMIOLOGICHESKOYE UPRAVLENIYE MINISTERSTVA ZDRAVOOKHRANENIYA SSSR. FACILITY: INSTITUT MEDITSINSKOY PARAZITOLOGII I TROPICHESKOY MEDITSINY IM. YE. I. MARTSINOVSKOGO MINISTERSTVA ZDRAVOOKHRANENIYA SSR, MOSCOW.

UNCLASSIFIED

1/2 024

UNCLASSIFIED

PROCESSING DATE--30OCT70

TITLE--SOME RESULTS OF STUDY OF ORGANIZATION OF HELMINTHIC DISEASES
CONTROL IN ROVNO AND CHERNOVTSY REGIONS OF THE UKRAINIAN SSR -U-
AUTHOR--(05)-SHULMAN, YE.S., VOLOSUK, V.P., ZHELOMUB, I.YA., LYUBAVINA,
M.G., LEVCHENKO, I.F.
COUNTRY OF INFO--USSR

SOURCE--MEDITSINSKAYA PARAZITOLOGIYA I PARAZITARNYYE BOLENI, 1970, VOL
39, NR 3, PP 356-359
DATE PUBLISHED--70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--PARASITIC DISEASE, DISEASE CONTROL, INTESTINAL DISEASE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--2000/0224

STEP NO--UR/0358/70/039/003/0356/0359

CIRC ACCESSION NO--AP0123987

UNCLASSIFIED

2/2 024

UNCLASSIFIED

PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0123987

ABSTRACT/EXTRACT--(U) GP-O- ABSTRACT. EXPERIENCE OF ORGANIZATION OF HELMINTHIC DISEASES CONTROL IN THE ROVNO AND CHERNOVTSY REGIONS OF THE UKRAINIAN SSR WAS STUDIED. STATE SANITARY CONTROL OF THE SANITARY CONDITIONS IN RURAL COMMUNITIES IS WELL ORGANIZED, OWING TO WHICH AND TO REGULAR DEHELMINTHIZATION MEASURES THE INFESTATION RATE OF ASCARIASIS HAS BEEN REDUCED CONSIDERABLY IN A NUMBER OF AREAS. HELMINTHIC DISEASE CONTROL MEASURES ARE PLANNED FOR EACH SETTLEMENT. A CONSIDERABLE ROLE IN THEIR ORGANIZATION IN THE VILLAGE BELONGS TO SANITARY FELDsher OF THE DISTRICT HOSPITAL. A NUMBER OF METHODS FOR BETTER ORGANIZATION OF HELMINTHIC DISEASES CONTROL. PARTICIPATION OF RURAL COUNCILS IN REALIZATION OF SANITARY MEASURES, GREATER ENLISTING COOPERATION OF RURAL MEDICAL WORKERS AND PUBLIC SANITARY WORKERS IN CONTROL OF SANITARY CONDITIONS ESPECIALLY OF DESINFECTION OF FECAL FERTILIZERS, COMBINATION OF HELMINTHIC DISEASE CONTROL MEASURES AND MEASURES FOR CONTROL OF ENTERIC INFECTIONS, ETC. FACILITY: INSTITUT MEDITSINSKOY PARAZITOLOGII I TROPICHESKOY MEDITSINY IM. MARTSINOVSKOGO. FACILITY: KIEVSKIY INSTITUT EPIDEMIOLOGII, MIKROBIOLOGII I PARAZITOLOGII. FACILITY: ROVENSKAYA OBLASTNAYA I GORODSKAYA SANITARNO EPIDEMIOLOGICHESKIYE STANTSII.

UNCLASSIFIED

SHUL'MAN, Z. P.

TECHNICAL TRANSLATION

FTIC-HT-13- 204-72

ENGLISH TITLE: A Problem of Heat Transfer of Non-Fourier Anomalously Viscous Liquids

RUSSIAN TITLE: Odná Zadacha Teploobmena Nativ'Eviskikh Anomal'no-Vyazkikh Zhidkostey

AUTHOR: B. K. Berkovskii, Z. P. Shul'man, N. D. Kovalevskaya

SOURCE: TEPLÓ - I Massobmen v Nan'yutovovskikh Zhidkostyakh. "Energiya", Moscow 1968

Translated for FTIC by OACSI

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USSR

UDC 532.526

SHUL'MAN, Z. P., BAYKOV, V. I., Institute of Heat- and Mass Exchange, Academy of Sciences, Belorussian SSR

"Derivation of the Boundary Layer Equations of a Nonlinearly Viscoplastic Medium"

Minsk, Inzvestiya Akademii Nauk BSSR, Seriya Fiziko-Energeticheskikh Nauk, No 1, 1971, pp 86-95

Abstract: For a nonlinearly viscoplastic medium, described by the rheologic model

$$\tau = \tau_0 + (\mu_p \dot{\gamma})^{\frac{1}{n}},$$

which is a further generalization of the Schvedoff-Bingham formula, the equations of motion are written down in a generalized orthogonal system of coordinates, and the boundary-layer equations are derived for a system of coordinates which is linked to the surface under investigation. The derivation proceeds as follows. If the Lamé coefficients are known, the equations of motion in any orthogonal system of coordinates can be obtained. The equation of the boundary layer of fluid, subject to the relationship of the viscous - stress tensor, is found under the assumption of the absence of mass forces, viscous dissipation, and with assumed constancy of all the material characteristics of the medium. One figure, 7 bibliographic entries. 1/1

USSR

UDC 615.372.015.4:[612.215.014.2+612.42.014.2

SHUL'MAN-SATIN, B. B., Moscow Institute of Vaccines and Sera imeni Mechnikov

"The Morphological Reaction of the Lungs and Lymphoid Organs to Multiple Aerosol and Subcutaneous Administrations of Toxoids"

Moscow, Zhurnal Mikrobiologii, Epidemiologii i Immunobiologii, No 11, 1971, pp 87-91

Abstract: A comparative study of the effectiveness of two different vaccination methods was performed on rabbits repeatedly immunized with a compound vaccine containing tetanus and botulinus (type A and B) toxoids and typhoid antigen. Both the aerosol and subcutaneous administrations induce a moderate, general immunomorphological reaction. In the lymph nodes, the degree of this reaction (macrophage and leukocyte infiltration) is the same after either method of vaccination. However, only the aerosol induces an immunological reaction in pulmonary tissue. On the whole, the reaction to triple vaccine is more intense than that to double vaccine containing just tetanus toxoid and typhoid antigen. Yet, no pathology suggesting stress reaction develops. The aerosol and subcutaneous methods induce the same, adequate degree of immunity.

1/1

UDC 621.383.5.001.5

USSR

YEGOROV, V.S., Candidate Of Technical Sciences; ZAYTSEVA, A.K., Candidate Of Technical Sciences; MURKINA, M.V., Engineer; ~~SHUL'NEVSTER, I.F.~~, Candidate Of Technical Sciences

"Device For Determination Of The Current-Voltage Characteristic Of A Photoelectric Converter"

Elektrotehnika, No 2, Feb 1972, pp 44-46

Abstract: Methods are considered for determining the reverse saturation current I_0 and the parameter A in the working region of the current-voltage characteristic of silicon photoelectric energy converters. The principles of operation and the units of a functional scheme are described. The scheme contains a logarithmic amplifier, storage devices, division unit, selective cells, converter of $\log I_0$ into I_0 , digital presentation unit, and a commutator. The device developed makes it possible to determine the parameters A and I_0 of photoelectric converters with an area from 1 to 4 cm² in the intervals $A = 1 - 5$, $I_0 = 1 \cdot 10^{-8} - 1 \cdot 10^{-4}$ a. The measurement error is not more than 5 percent and the measurement time does not exceed 10 sec. 4 fig. 4 ref.

1/1

UDC 577.3

USSR.

~~SHIN 'PEKOV A A~~

"Methodological Features of the Biomagnetic Experiment"

Vliyaniye Magnitnykh Poley na Biologicheskiye Ob"yekty, pp 178-189

Abstract: During the biomagnetic experiment, the stimulus is the magnetic flux. From this it follows that it is useful to use units characterizing magnetic flux (the weber) and its intensity (the tesla), because these are international units of magnetic flux. There is not a sound methodological basis for emphasizing the different biological effect of the north and south magnetic poles. If this difference is observed, one can speak of different quantitative levels of action caused by significant gradients of the magnetic field near the poles and lack of precision in reproducing coordinates. The work of magnetobiologists confirms the significance of the magnetic field and expands our knowledge of not merely biological processes, but also the nature of the electromagnetic field.

1/1

- 100 -

1/2 036 UNCLASSIFIED PROCESSING DATE--30OCT70
TITLE--IMPROVING THE CORROSION RESISTANCE OF SILVER COATINGS BY DECREASING
POROSITY -U-
AUTHOR--(02)-GUSEV, S.N., SHULPIN, G.P. 5
COUNTRY OF INFO--USSR
SOURCE--KIEV, TEKHNLOGIYA I ORGANIZATSIYA PROIZVODSTVA, NO 1, 1970, PP
70-73
DATE PUBLISHED-----70
SUBJECT AREAS--MATERIALS, MECH., IND., CIVIL AND MARINE ENGR
TOPIC TAGS--SILVER, METAL COATING, CORROSION RESISTANCE, HYDROGEN, GAS
ADSORPTION, POROUS METAL, ULTRASONIC CLEANING, ELECTRODEPOSITION
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/IRAME--1999/1332 STEP NO--UR/0418/70/000/001/0070/0073
CIRC ACCESSION NO--AP0123290
UNCLASSIFIED

2/2 036

UNCLASSIFIED

PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0123290

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. A COMPLEX STATISTICAL STUDY WAS MADE IN ORDER TO EXPLAIN THE EFFECTS OF TECHNOLOGICAL AND DESIGN FACTORS ON POROSITY AND CORROSION RESISTANCE. IT WAS SHOWN THAT THE PRIMARY REASON FOR POROSITY OF SILVER COATINGS IS IN THE ADSORPTION OF HYDROGEN BUBBLES RELEASED DURING JOINT DISCHARGE WITH SILVER. THE COMBINED USE OF THE TECHNOLOGICAL AND DESIGN MEANS FOR DECREASING POROSITY CAN RAISE RESISTANCE TO CORROSION 3-7 TIMES. THE MOST EFFECTIVE WAY OF DECREASING POROSITY IS BY STABILIZING TANK CURRENT AND USING ULTRASONIC WASHING. THE EDGE EFFECT MUST ALSO BE CONSIDERED.

UNCLASSIFIED

SHUL' PIN, YU. A.

neurology

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2/2

RODOLFOV, A. S., et al., *Sovremennye Problemy Kibernetiki* -- Sbornik, "Nauka," 1970, pp 262-267

Model network of neurons which possesses the property of undulating activity -- that is, the passage of pulses batches along it.

Abstract: This paper is devoted to modeling the processes of the undulating activity of a neural net.

A model of a neuron, which contains a blocking generator whose frequency is controlled and a pulse shaper, is used as the elementary unit of a neural net. The neuron model has a static characteristic which is almost logarithmic. Besides the properties of space and time summation, the model possesses the property of adaptation. Adaptation is understood to mean a decrease in the pulse frequency of adaptation by an individual neuron in the presence of a constant input action. Two ways of accomplishing adaptation in a neuron are examined: 1) alteration of the neuron from the input action; 2) introduction of feeding feedback.

It appears that on the basis of adapting neurons one can model a spontaneous generator of pulse batches (a "neuron multi-generator") and construct a switching 1/2

USSR

UDC: 681.325

RAMONIS, A. A., SHUL'SKIY, P-V. M.

"Method of Conversion of Sine-Cosine Signals of a Raster Linear and Angular Displacement Sensor"

USSR Author's Certificate Number 305500, filed 9/07/70, published 29/07/71 (translated from Referativnyy Zhurnal Avtomatika, Telemekhanika i Vychislitel'naya Tekhnika, No 3, 1972, Abstract No 3 A273 P)

Translation: A method is suggested for conversion of the sine-cosine signals of a raster linear and angular displacement sensor to a signal, the phase shift of which is proportional to the displacement. In order to increase the accuracy of the conversion, the sine and cosine signals of the raster sensor modulate the corresponding signals of the carrier frequency, phase shifted by one quarter period, in amplitude and in phase, with subsequent addition and filtration of the carrier frequency.

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USSR

UDC 620.193.37

VASILENKO, I. I., MELEKHOV, R. K., SHULTE, A. Yu. KALINNIKOV, Ye. S.,

Physicomechanical Institute, Academy of Sciences, Ukrainian SSR, L'vov;
Central Scientific Research Institute of Ferrous Metallurgy imeni I. P. Bardin,
Moscow

"Increasing the Strength of Steel 17G1S Against Corrosive Cracking by Refining
It With Synthetic Slag"

Kiev, Fiziko-Khimicheskaya Mekhanika Materialov, Vol 7, No 4, 1971, pp 31-33

Abstract: The tendency of carbon steel toward corrosive cracking is determined to a considerable degree by the quantity and sizes of microstructural defects, which are foci of corrosive mechanical cracks. Therefore the refining of steel by liquid synthetic slag in a crucible, which provides purification from harmful admixtures, nonmetallic inclusions, and an increase in density, should decrease its sensitivity to corrosive cracking. A study was made of the influence of this means of refining upon the stability of low-alloy steel 17G1S against cracking in an alkaline electrolyte and a nitrate electrolyte. One batch of steel was produced by the conventional open-hearth technology, and the other was refined with synthetic slag in a crucible. It

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USSR

VASILENKO, I. I., et al, Fiziko-Khimicheskaya Mekhanika Materialov, Vol 7, No 4, 1971, pp 31-33

was established that the refining of low-alloy steel by synthetic slag considerably increases its resistance against corrosive cracking in an alkaline solution and in a nitrate solution. The greater tendency of the steel melted by the conventional open-hearth method to corrosive cracking is caused principally by the presence of a large quantity of considerably large nonmetallic inclusions. 1 figure. 3 tables. 5 references.

2/2

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USSR

UDC 538.221+538.245

BELOV, K. P., YELYUTIN, O. P., KATAYEV, G. I., NIKITIN, S. A., PSHECHENKOVA, G. V., TARATYNOV, V. P., and SHUL'TE, L. A., Moscow State University imeni M. V. Lomonosov, Central Scientific Research Institute of Ferrous Metallurgy imeni I. P. Bardin

"Study of Magnetic Properties of Rare-Earth Dysprosium-Holmium-Erbium Alloys at a Temperature of 4.2° K"

Moscow, Izvestiya Akademii Nauk SSSR, Seriya Fizicheskaya, Vol 36, No 6, 1972, pp 1247-1251

Abstract: The absence of systematic research on saturation magnetization for polycrystalline samples of rare-earth metals and their alloys makes it impossible to establish whether, in practice, they can be used as high-induction materials in fields up to 50 kOe at low temperatures. The purpose of the present article was to attempt to fill this gap. Pure rare-earth metals (obtained from the State Scientific Research and Planning Institute of the Rare Metals Industry) were studied, as well as dysprosium-holmium-erbium system alloys. Their magnetization curves were measured in fields up to 50 kOe at 4.2° K, values for coercive force and remanence were determined, and hysteresis loops were taken.

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USSR

UDC 669.046.5

SHUL'TE, Yu. A.

"Trends in Combatting Nonmetallic Impurities"

Moscow, V sb. "Sovremennyye problemy kachestva stali" (MISIS) (Collection of Works. Modern Problems of Steel Quality). (Moscow Institute of Steel and Alloys), Izd-vo "Metallurgiya," No 61, 1970, pp 16-22

Translation of Abstract: Results are presented of investigations on the improvement of the reduction process, with the aim of steel refining and obtaining optimal forms of impurities, ensuring a higher quality level. Single-valued dependencies between the degree of steel purity and the combination of its physico-chemical properties are established. 5 figures, 2 tables, 6 references.

1/1

- 50 -

USSR

UDC 669.189

SHUL'VE, Yu. A., KORNEYCHUK, A. I., SHERSTYUK, A. A., and SPERANSKIY, B. S.
 "Effect of Casting Temperatures on the Mechanical Properties and Cold
 Brittleness of G13L High-Manganese Steel"

Metallurgicheskaya i Gornorudnaya Promyshlennost', No 2, 1971, pp 48-50

Abstract: High-manganese steel with fine-grained structure has good mechanical properties and durability. The relation between the casting temperature and the mechanical properties of the steel were studied. The temperature of the metal was measured in the ladle directly in front of the casting form by a thermocouple and potentiometer setup. At lower casting temperatures, the mechanical properties were improved. The relation between impact strength σ_K and casting temperature t is $\sigma_K = 123 - 0.071 t$. The strength σ_B is related to the casting temperature t by $\sigma_B = 220 - 0.097 t$ and the specific elongation δ to casting temperature by $\delta = 123 - 0.062 t$. Chemical composition also affects the mechanical properties. Samples for mechanical testing were cast from metals of the same composition at temperatures of 1440 and 1385°C. They were cooled in alcohol-liquid H_2 mixtures and tested for impact strength from +100 to -100°C. Samples cast at the lower temperature had greater strength.

1/1

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USSR

UDC 669.189:621.746.75

VOLCHOK, I. P., SHUL'TE, YU. A., and PINCHUK, YE. I., Zaporozh'ye
"Nonmetallic Inclusions and Failure of Tool Steel"

Moscow, Izvestiya Akademii Nauk SSR, Metally, No 1, Jan-Feb 1970, pp 109-112

Abstract: A description is given of a special attachment for a metallographic microscope designed for the study of the behavior of non-metallic inclusions during stretching of a specimen-microsection. The results of investigations of steel with different types of non-metallic inclusions showed that the form of the inclusions has a significant effect on the origin and propagation of microcracks. Eutectic sulfides of the second type contributed most to the formation and propagation of microcracks, while globular inclusions of the first type contributed the least. A correlation dependence was established between the extent of non-metallic inclusions in steel and the magnitude of effective surface energy.

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1/2 015
UNCLASSIFIED
TITLE--RESULTS OF TESTING METHODS FOR DETERMINATION OF GASES IN
FERROCHROMIUM -U
AUTHOR--(03)--SHITIKOV, V.S., GEDEREVICH, N.A., SHULTE, YU.A.
COUNTRY OF INFO--USSR
SOURCE--ZAVOD. LAB. 1970, 36(2), 149-50
DATE PUBLISHED--70
SUBJECT AREAS--MATERIALS
TOPIC TAGS--FERROCHROMIUM, GAS CONTAINING METAL, METAL CONTAINING GAS,
FERROALLOY, OXYGEN, NITROGEN, HYDROGEN
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1999/1054
STEP NO--UR/0032/70/036/002/0149/0150
NO--AP0123047
UNCLASSIFIED

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UNCLASSIFIED

PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0123047

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. RESULTS OF ANALYZING FERROCHROMIUM FOR GASES V. S. SHITIKOV, AND N. A. GEDEREVICH, 1967) WERE NOT CONSISTENT BECAUSE OF INHOMOGENEITY OF SAMPLES. FERROCHROMIUM SAMPLES, (CONTG. 0.06PERCENT C, 0.6PERCENT SI, 70.9PERCENT CR), WERE SENT TO SEVEN DIFFERENT LABS. ABS. DEVIATIONS WERE 0.01PERCENT, 0.003PERCENT, AND 2.0 CM PRIME3-100 G FOR O, N, AND H, RESP. MEAN RELATIVE DEVIATIONS WERE 12.0, 21.1, AND 25.5PERCENT, RESP.; THE MAX. TO MIN. RESULT RATIOS WERE 1.5, 3.0, AND 7.5, RESP. FACILITY: ZAPOROZH. MASHINOSTROIT. INST., ZAPOROZHE, USSR.

1/2 046 UNCLASSIFIED PROCESSING DATE--04DEC70
TITLE--MANIFESTATION AND CALCULATION OF THE NONANALYTICAL NATURE OF THE
CRITICAL FREQUENCIES OF DIPOLE VIBRATIONS -U-
AUTHOR--(03)-BELOUSOV, M.V., POGAREV, D.E., SHULTIN, A.A.
COUNTRY OF INFO--USSR
SOURCE--FIZ. TVERD. TELA 1970, 12(4), 991-4
DATE PUBLISHED-----70
SUBJECT AREAS--PHYSICS
TOPIC TAGS--DIPOLE INTERACTION, ELECTRIC DIPOLE MOMENT, VIBRATION
ANALYSIS, VIBRATION EFFECT, VIBRATION MEASUREMENT, ANISOTROPIC MEDIUM,
CRYSTAL ANISOTROPY, RAMAN SPECTRUM, IR SPECTRUM, CALCIUM COMPOUND
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--2000/1305 STEP NO--UR/0181/79/012/004/0991/0994
CIRC ACCESSION NO--AP0124956
UNCLASSIFIED

2/2 046

UNCLASSIFIED

PROCESSING DATE--04DEC70

CIRC ACCESSION NO--AP0124956

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. EXPRESSIONS WERE OBTAINED FOR THE FREQUENCY AND INTENSITY OF "ISOLATED" BAND OF DIPOLE VIBRATION IN AN ANISOTROPIC CRYSTAL AS THE FUNCTION OF DIRECTION OF THE WAVE VECTOR. QUANT. EXPTL. INVESTIGATION WAS CARRIED OUT OF NONANAL. CHARACTER OF THE LIMITING FREQUENCIES BY USING IR REFLECTION AND TRANSMISSION SPECTRA OF CALCITE CRYSTALS. IN THE TRANSMISSION SPECTRUM, A BAND IS OBSD. ON THE LONGITUDINAL FREQUENCY. A NECESSITY IS NOTED OF THE ACCOUNT OF NONANAL. CHARACTER IN THE INTERPRETATION OF IR SPECTRA AND THE RAMAN SPECTRA OF ANISOTROPIC CRYSTALS. FACILITY: LENINGRAD. GOS. UNIV. IM. ZHDANOVA, LENINGRAD, USSR.

UNCLASSIFIED

1/2 046 UNCLASSIFIED PROCESSING DATE--02OCT70
TITLE--PECULIARITIES IN THE VIBRATIONAL SPECTRA OF CESIUM AND RUBIDIUM
NITRATE CRYSTALS IN ITS LOW TEMPERATURE PHASES -U-
AUTHOR--(02)-KARPOV, S.V., SHULTIN, A.A.
COUNTRY OF INFO--USSR
SOURCE--PHYSICA STATUS SOLIDI, 1970, VOL 39, NR 1, PP 33-38
DATE PUBLISHED-----70
SUBJECT AREAS--PHYSICS
TOPIC TAGS--IR SPECTRUM, ABSORPTION SPECTRUM, X RAY ANALYSIS, CRYSTAL
STRUCTURE, VIBRATION SPECTRUM, CESIUM, RUBIDIUM, NITRATE, LOW
TEMPERATURE EFFECT
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1989/1401 STEP NO--GE/0030/70/039/001/0033/0038
CIRC ACCESSION NO--AP0107874
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PROCESSING DATE--02JCT70

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CIRC ACCESSION NO--AP0107874
ABSTRACT/EXTRACT--(U) GP-0-

ABSTRACT. POLARIZED IR ABSORPTION SPECTRA OF
CSNO SUB3 II AND RBN0 SUB3 IV CRYSTALS HAVE BEEN INVESTIGATED IN THE
REGION OF THE FUNDAMENTAL VIBRATIONS OF THE NITRATE IONS AT 80 AND
300DEGREESK AS WELL AS THE RAMAN SPECTRA OF THESE CRYSTALS AT ROOM
TEMPERATURE. APART FROM THE LOCAL FIELD EFFECTS AND THE DAVYDOV
SPLITTING OF SOME VIBRATIONAL TERMS ALSO A SPLITTING DUE TO THE PRESENCE
OF SEVERAL SETS OF MOLECULES NOT RELATED BY SYMMETRY IN A UNIT CELL WAS
OBSERVED. THESE RESULTS AGREE WITH THE MORE ACCURATE DATA OF X RAY
ANALYSIS OF THE CRYSTAL STRUCTURE OF THE LOW TEMPERATURE PHASES OF
CESIUM AND RUBIDIUM NITRATE.

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AA0043435-

Shafts, B.V.

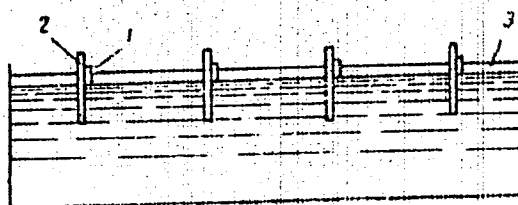
UR 0482

Soviet Inventions Illustrated, Section I Chemical, Derwent, 3-70

203921 A DEVICE FOR COOLING LIQUID SELF-HEATING ANODE in electrolyzers for the production of aluminium, by means of metallic ribs with their bottom ends immersed in the liquid anode, is characterized in that in order to control temp. along the surface of the anode and to change over the device without stopping the electrolysis, the cooling ribs are made in the form of sections freely fixed to the anode. These sections are made of steel beams and plates made of copper, aluminium or other highly conducting metals. The proposed device consists of steel beams 1 and plates 2. The latter are fixed to the beams 1 and are immersed half-way down their length in the liquid anode. The temp. of the liquid anode can be controlled over its whole area by decreasing or increasing the number of sections and also the number of plates in the sections. This cooling unit can be replaced by a new one without stopping the electrolysis process. 6.2.67. as 1133087/22-1. M.A.KOROBV et al. Irkutsk Aluminium Works (4.7.69.) Bul.10/10.3.69. Class 40c. Int.Cl.C22d.

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19761763

AA0043435

AUTHORS: Korobov, M. A.; Shul'ts, B. V.; Yanko, E. A.; Ivanets, T. A.; Sobol', I.I.
Kostevich, D. N.; Ratmanov, V. N.; Kulakov, A. N.; Kits - Kovyazina, A. A.

Irkutskiy Alyuminiyevyy Zavod

19761764

5/7

USSR

UDC: 621.375.421

MARTVERK, P. E., SHUL'TS, E. A.

"Analysis of a Wide-Band Amplifier Stage Based on a Field-Effect Transistor"

Tr. Tallin. politekhn. in-ta (Works of the Tallinn Polytechnical Institute),
1970, A, No 291, pp 47-56 (from RZh-Radiotekhnika, No 11, Nov 70, Abstract
No 11D163)

Translation: The authors study the transmission factor, and the input and
output impedances of an isolated amplification stage based on a field-effect
transistor as functions of frequency when the transistor is operating into a
resistance-capacitance load for three field-effect transistor circuit con-
nections. The results of some experimental studies are given. Four illus-
trations, bibliography of seven titles. Resumé.

USSR

UDC 669.046.54

VASHCHENKO, A. I., SEN'KOVSKIY, A. G., LIFSHITS, A. Ye., and SHUL'TS, L. A.

Okisleniye i Obezuglerozhivaniye Stali (Oxidation and Decarburization of Steel), Moscow, 1972, Izd-vo Metallurgiya, 336 pp

Translation of Introduction: Steel items are produced mainly from ingots and billets by heating them to high temperature and applying high pressure (rolling, stamping, forging, and others). Thereafter a great number of items are subjected additionally to heat treatment. Both processes require heating of the metal in flame or electric furnaces to high temperatures. After heating, the metal interacts with the furnace atmosphere (with combustion products in the open-flame furnace, and with air in electric furnaces) and the ensuing reaction with gases-oxidizers leads to oxidation and decarburization of steel.

The oxidation of steel increases with the heating temperature, provided other conditions are equal. The pressure treatment of steel requires heating to high temperatures (1100-1300°C). As a result the oxidation is excessive. Under the best conditions about 1% of the metal undergoes oxidation and is lost in the form of scale, and in some cases the percentage reaches 1.5-2% or more during each heating.

1/14

USSR

VASHCHENKO, A. I., et al., Okisleniye i Obezuglerozhivaniye Stali, Moscow, 1972, Izd-vo Metallurgiya, 336 pp

Considering that during the production of steel items it is often necessary to heat the steel several times, the oxidation increases to 5-6% and the metal is lost as scale. However, the harm produced by oxidation does not end here. The scale which is formed on the metal surface damages high-pressure equipment and causes an excessive wear of it.

In cases when scale is rolled (during hot rolling) and stamped (during stamping) into the metal during the high-temperature treatment, the metal becomes unusable and is lost as scrap.

During production, for example, of sheet metal, thin-walled pipes, and other items, the scale is removed by pickling in special solutions. This complicates the production process and raises the price of parts produced by high-temperature treatment.

In addition to oxidation, the furnace gases also cause the decarburization of steel, which results in losses for the national economy. As a result of decarburization the quality of the metal's surface layer is low. In

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USSR

VASHCHENKO, A. I., et al., *Okisleniye i Obezuglerozhivaniye Stali*, Moscow, 1972, Izd-vo Metallurgiya, 336 pp

order to produce items with predetermined qualities, this layer must be removed, and that part of the metal is lost. The production of steel items becomes expensive and complicated.

All these facts indicate that the production of steel without the oxidation and decarburization processes is a very important problem for the national economy. This explains why the problem of the nonoxidative and non-decarburizative heating of steel in furnaces is the focus of a great deal of attention in the Soviet Union and elsewhere. A considerable number of works have been published on this subject. Among such Soviet works are those of V. I. Arkharov, A. V. Smirnov and L. V. Beloruchev, V. F. Kopytov, V. A. Kuroyedov, A. A. Skvortsov, N. Yu. Tayts, A. A. Shmykov, I. N. Frantsevich, R. F. Voytovich, V. A. Lavrenko, L. A. Shvartsman, and others. Among foreign authors the following should be named: H. Tamman, C. Wagner, H. F. Mott, K. Hauffe, O. Kubashevski and B. Hopkins, A. J. Hochkiss, C. M. Webber, G. Benar, D. V. Marphy, V. E. Jomini, P. Cofstadt, and others.

Industrial workers also contribute to the decrease of oxidation and decarburization of steel. The combined efforts of scientists and engineers

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AA0040661- Skul'ts, L.A. UR 0482

Soviet Inventions Illustrated, Section I Chemical, Derwent, 1-70

241478 FURNACE ATMOSPHERE CONTROL is by measuring the resistance of an inserted metal oxide film as a function of the partial pressure of atmospheric oxygen there. It is known that the resistivity of nickel oxide etc changes smoothly as a function of this partial pressure. The introduction of the film to the furnace enables the partial oxygen pressure there to be measured by any of the known methods of resistance measurement. A typical case is the resistance of woostite (Fe_xO_y) which increases by something like 2.5 times when the air flow coefficient ranges from 1.0 to 0.5. At $\alpha=0.5$ there is a sharp drop in resistance due to the woostite going over into iron; at $\alpha = 1.0$, there is a marked rise in resistance due in this case to the transition of woostite to magnetite (Fe_3O_4).
2.2.68 as 1218449/22-1. BOGOYAVLENSKII M.S. et al.
MOSCOW EVENING METALLURGICAL INST. (5.9.69) Class 81c.
Int.Cl.C 21d.

19750251

AA0040661

AUTHORS: Bogoyavlenskiy, M. S.; Vashchenko, A. I.; and Shul'ts, L. A.

Moskovskiy Vecherniy Metallurgicheskiy Institut

19750252

USSR

UDC 681.3.06.51

BORODIN, V. V., MAYOROVA, V. A., ~~SHULITS, M. M.~~

"General Structure of "Kompas" Series Information Retrieval Systems"

Nauchno-techn. Inform. Sb. Vses. In-t. Nauchn. i Tekhn. Inform. [Scientific-Technical Information. Collection of All-Union Institute for Scientific and Technical Information], Series 2, No. 9, 1970, pp 25-31 (Translated from Referativnyy Zhurnal Kibernetika, No. 4, April, 1971, Abstract No. 4 V647 by the authors).

This article is the first of a series of articles dedicated to descriptor information retrieval systems with positional coding. The article studies problems of the general structure of an information retrieval system in the "KOMPAS" series, developed at the scientific research institute for applied mathematics and cybernetics (NIIPMK). The general structure refers to the formal model and language of representations. The formal model of the information retrieval system based on the language of the theory of multiply coupled mappings is presented in detail. A representation of IRS by computers based on the operative method of programming and the method of construction of concrete IRS of the "KOMPAS" series are presented.

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USSR

UDC 541.13

SHUL'TS, M. M., and STEFANOVA, O. K.

"Electrode Properties of Ion Exchange Membranes and Their Mechanism of Charge Transfer. I. Regularities Corresponding to the Predominance of One of the Possible Transfer Mechanisms in a Membrane"

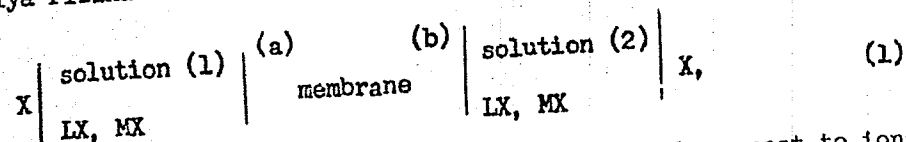
Leningrad, Vestnik Leningradskogo Universiteta, Seriya Fizika i Khimiya, No 1, Feb 71, pp 22-29

Abstract: Certain counterions in an ion exchange membrane may in the general case be found in different energy states. This must, in principle, affect the ability of ions to migrate through the ionite, and sufficiently strong energy differentiation may lead not only to a quantitative difference in their kinetic characteristics, but also to a difference in the mechanisms involved in the transfer effected by these ions. This may also be true for the electrode properties of ion exchange membranes, particularly the specificity constants of their electrode functions. The present series of articles examines this question. Systems containing no more than two kinds of counterions are examined. The galvanic cell incorporating an ion exchange membrane is constructed according to the scheme

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USSR

SHUL'TS, M. M. and STEFANOVA, O. K., Vestnik Leningradskogo Universiteta, Seriya Fizika i Khimiya, No 1, Feb 71, pp 22-29



where X designates electrodes acting reversibly with respect to ions X^- in solutions of electrolytes LX and MX.

The purpose of the present article is to find the regularities which control the electrode properties of a membrane, subject to different charge transfer mechanisms. These mechanisms may be the solvation, vacancy or croquet mechanism. The form of the dependence of the emf of galvanic cell (1) on the activities of the electrolytes in its solutions is determined for the case where one of the above charge transfer mechanisms predominates in the membrane. The next article in the series will examine the expression for the emf corresponding to a mixed transfer mechanism.

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Ion Exchange

DSSR

UDC 541.135.5 + 541.183

SHUL'TS, M. M., Leningrad State University imeni A. A. Zhdanov, Leningrad,
Ministry of Higher and Secondary Specialized Education RSFSR
"Specificity of Electrode Functions of Ion-Exchange Membranes and the
Mechanism of Charge Transfer in Them"

Moscow, Doklady Akademii Nauk SSSR, Vol 194, No 2, 1970, pp 377-380

Abstract: The article shows that the values of the specificity constants of ion-exchange membranes will preferentially exhibit either the energies of solvation of the counterions in the ion exchanger or their energies of bonding with the fixed ions of ionogenic groups, depending on which of the following mechanisms predominates: 1) charge transfer directly by the dissociated ions (solvated by the ion-exchanger environment) or 2) charge transfer by the counterions from the undissociated ionogenic groups as a result of their transition to specific vacancies (vacancy ion mechanism). The charge-transfer mechanism of the membrane must be taken into consideration in any theoretical calculation or estimate of the values of the kinetic and equilib-

USSR

SHUL'TS, M. M., Doklady Akademii Nauk SSSR, Vol 194, No 2, 1970, pp 377-380

rium factors of the specificity constants, as well as in the interpretation of experimentally found values. In the production of membrane electrodes with a specific electrode function for practical uses it is important not only that functional groups which selectively sorb the appropriate ion be introduced into the membrane structure, but also that a charge-transfer mechanism be assured such that the electrode behavior of the membranes exhibit specific properties of these groups.

Ion Exchange

UDC 541.135.5 + 541.183

USSR
SHUL'TS, M. M., Leningrad State University imeni A. A. Zhdanov, Leningrad,
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USSR

SHUL'TS, S., Georgian Information Correspondent

"A 'Magician' Joins the Laboratory"

Tbilisi, Zarya Vostoka, 30 Mar 73, p 2

Abstract: The ancient method of healing by placing one's hands over the patient's diseased organs is still being practiced in some of the world's regions, including Tbilisi where A. Krivorotov, known to some as "the magician," has for years been successful in this occupation. A while ago, he requested physicians and scientists to investigate his power and to explain it from the scientific viewpoint. Photographs of his hands revealed an intense luminescence around his fingers, which was identified as ultraviolet rays. This type of radiation is emitted by all human bodies, though by some more than by others, and it can be intensified through appropriate exercise. Strongly radiating hands presumably induce an avalanche-like resonance of bioelectromagnetic rays, which regulates various system, especially the neurohumoral system. In a yet unelucidated way, the healthy hands impose their healthy rhythm on the diseased organ and thus heal it. It is believed that this explanation opens wide possibilities for the hand-placing method to be applied in regular medicine.

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UDC: 681.3

USSR

BOYKOV, V. N., KRENDEL', Yu. M., RABINOVICH, V. I., TROFIMOV, O. Ye.,
SHUL'TS, V. P.

"On Calculating the Precision of Digital Measuring Instruments"

V sb. Teoriya i praktika ispol'z. sredstv tekhn. kibernetiki. Kn. 1 (Theory and Practice in Utilizing the Facilities of Technical Cybernetics--collection of works. Book 1), Novosibirsk, 1970(1971), pp 94-99 (from RZh-Matematika, No 11, Nov 71, Abstract No 11V786)

Translation: The authors consider the effect which improper operation of flip-flops and comparison devices has on the accuracy of a digital device based on the method of binary sweep balancing. In order to explain "in pure form" the nature of the effect which these elements have on the operating precision of the device, a separate analysis is made: for instance, in studying the influence of incorrect flip-flop operation, the comparison device is first assumed as ideal, then real. For the sake of definiteness, distribution of the measured quantity X is assumed to be uniform, and the average modulus of the error is taken as the quality criterion for accuracy of the device. It is noted that all results can be recorded in general form or obtained in the same way for specific distributions of X with the use of many other metrological criteria; e. g., variance or mathematical expectation of the error, etc. V. Mikheyev.

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UDC: 681.3

USSR

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Translation: The authors consider the effect which improper operation of the flip-flops and the comparison unit has on the accuracy of a digital device based on the method of binary sweep balancing. In order to explain the nature of the effect which these elements "in pure form" have on the accuracy of the device, a separate analysis is made: for instance in studying the effect of improper operation of the flip-flops, the comparison unit is first assumed to be ideal, and then real. It is assumed for the sake of definiteness that the distribution X of the measured quantity is uniform, and the average absolute value of the error is used as the cri-

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USSR

BOYKOV, V. N. et al., Teoriya i praktika ispol'z. sredstv tekhn. kibernetiki.
Kn. 1, Novosibirsk, 1970(1971), pp 94-99

terion of accuracy of the instrument. It is noted that all the results may be written in general form or derived in the same way for distributions X using many other metrological criteria (variance of the error, mathematical expectation of the error, etc.). V. Mikheyev.

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Acc. Nr: **AP 0047241**

Ref. Code:

UR 0606

PRIMARY SOURCE: Urologiya i Nefrologiya, 1970, Nr
PP **7-11**

ACTIVITY OF LACTATEDEHYDROGENASE IN SOME DISEASES OF THE KIDNEYS

G. P. Shullsev, Ya. P. Tsalenchuk, A. A. Anders

The authors studied the activity of lactatedehydrogenase (LDH) in 15 healthy persons and in 74 patients suffering from various diseases of the kidneys and the urinary tracts. It was found that determination of LDH activity in the blood and urine served as a valuable auxiliary diagnostic test. A rise of urinary excretion of this enzyme may point to affection of the kidneys. Determination of LDH in the urine may be of value in the diagnosis of latent pyelonephritis and of malignant tumours of the kidney and the urinary bladder.

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MEDICINE

Diagnosis

USSR

~~SEMIKHOV, G. P.~~, Professor, BOGIN, Yu. N., Candidate of Medical Sciences, and
ARKHIPOV, N. S., 4th Chair of Therapy, Central Institute for the Advanced Training
of Physicians, and Central Clinical Hospital No. 1, Ministry of Railways, USSR,
Moscow

"Ultrasound Diagnosis of Some Diseases of the Kidneys"

Moscow, Klinicheskaya Meditsina, Vol 43, No 7, Jul 70. pp 3-6

Abstract: The Soviet UZD-5 ultrasonic apparatus which permits examination of
tissues to a depth of 15cm., was used in the diagnosis of certain kidney diseases.
Single-lead and double-lead echo-probes were placed between the 12th thoracic and
3d lumbar vertebrae, 4-5 cm to the side of the midline. The echorenograms
obtained were used to detect various diseases of the kidneys in 206 patients. The
characteristic pictures obtained by echograms were used in localizing kidney stones,
contour deformities, hydronephroses, tumors, loci of degeneration, etc. The
patients subjected to ultrasonic examination experienced no discomfort, and there
were no undesirable clinical manifestations. Further studies are needed to
establish diagnostic criteria for healthy and infected kidneys on the basis of
frequency, intensity, and rate of ultrasonic diffusion in the normal and under
normal and pathological conditions.

1/1

Hematology

UDC 615.385.1

USSR

SHULUTKO, L. S., MIKHNOVICH, Ye. P., and ANTONOVA, Ye. V., Blood Preservation Laboratory, Blood Preparation Division, Leningrad Institute of Hematology and Blood Transfusion

"Use of Gelatinol in Erythrocyte Transfusion Fluids Employed in Extracorporeal Circulation"

Moscow, Problemy Gematologii i Perelivaniya Krovi, Vol 15, No 9, Sep 70, pp 57-59

Abstract: Changes in transfusion fluids containing a suspension of erythrocytes in gelatinol with a low calcium content were investigated after varying periods of storage and after recirculation in an ISL-2 apparatus. Among the indices studied were pH; osmotic pressure of the erythrocytes; content of labile phosphorus in ATP; content of free hemoglobin, potassium, and inorganic phosphorus in the liquid part of the medium; content of formed elements and morphological changes in the erythrocytes. According to these indices, plasma-substitute erythrocytes can be stored for 5 to 7 days without deterioration. After 48 hours' storage, the erythrocytes showed marked resistance to mechanical and other factors involved in the operation of the ISL-2.

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ACC. NR:

AP0036439

Ref. Code: UR 0213

PRIMARY SOURCE: Okeanologiya, 1970, Vol 10, Nr 1, pp 20-29

B. A. SHULYAK, S. M. ANTSEPEROV, S. P. KAZAKOV, N. K. KALININA
V. I. LAZAREV

**THE DIFFERENTIAL CHARACTERISTIC OF THE ASYMMETRY OF ORBITAL
VELOCITIES OF THE INFINITE-LENGTH WAVE STREAM**

Summary

The experimental methods to study phase and orbital velocities of gravity waves in a ring-shaped channel are discussed. Data are presented on the differential characteristic of the asymmetry of orbital velocities for both the ring-shaped and the linear channels. A good coincidence with the formulae of Stokes and Longuet-Higgins has been obtained for the bottom layer only at the phase points $\theta_1 = \frac{\pi}{2}$ and $\theta_2 = \frac{3}{2}\pi$. The experimental data for other phase points and in particular for $\theta_3 = \pi$, disagree with the theory.

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Acc. Nr.: **AP0029329**

Ref. Code: UR 0240

PRIMARY SOURCE: *Gigiyena i Sanitariya*, 1970, Nr 1, pp 32-36

REMOVAL OF CERTAIN ENTERIC VIRUSES AND BACTERIA
FROM SEWAGE IN A CIRCULATION OXIDIZING CHANNEL

Goncharuk, Ye.I.; Grigor'yeva, L.B.; Bey, T.V.;
Shulyak, E.V., Shulyak, E.V.; Korchak, G.I.

Investigations have shown the treatment of sewage in a circulation oxidizing channel for two days to be a highly efficient means of decontamination judging by chemical indices. The sewage proved to be free of Coxsackie B5 and ECHO 19 viruses in 24 and 48 hours consecutively and that of Esch. coli bacteriophage in 12 hours in the initial concentration amounting 50 PFU/ml and in 16 hours, when it amounted to 6000-7000 PFU/ml. The pathogenic serotypes of B. coli in a mixture of sewage and active slime were recovered for a period of 3-7 days in the initial contamination equaling 1 million a litre and for 15-18 days if it amounted to 100 million a litre. The Coxsackie B5 virus was recovered from active slime up to the third day and ECHO 19 virus - up to the 5th day. The Esch. coli bacteriophage was present for 15 to 25 days depending on the initial concentration. Disinfection of treated sewages is considered to be an obligatory measure.

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Acc. Nr.: AP0029329

Ref. Code: UR 0240

PRIMARY SOURCE: Gigiyena i Sanitariya, 1970, Nr 1, pp 32-36

REMOVAL OF CERTAIN ENTERIC VIRUSES AND BACTERIA
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Goncharuk, Ye.I.; Grigor'yeva, L.B.; Bey, T.V.;
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REEL/FRAME

USSR

UDC 619:616.988.43

BOYKO, A. A.; SHULYAK, F. S.

Moscow, Yashchur. Biologo-Ekologicheskiy Aspekt Problemy (Foot-and-Mouth Disease. Biological and Ecological Aspects of the Problem), "Kolos," 1971, 352 pp

Translation: Introduction: To this date foot-and-mouth disease remains the scourge of the livestock breeding industry. Reduced productivity and losses incurred in the value of animals which recover from the disease are sources of constant anxiety. This is particularly true of the malignant form of the disease, when 60-70% of adult animals perish. Mass outbreaks of the usual form of the disease among young stock (calves, lambs, and young pigs) are also noted during the first days of life.

To these direct losses should be added the considerable funds expended on quarantine and other veterinary sanitation measures, such as disinfection, vaccination, and medical preparations. Legal restrictions limit agricultural activities in regions and

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USSR

BOYKO, A. A., et al, Yashchur. Biologo-Ekologicheskii Aspekt Problemy, 1971, 352 pp

countries unsafe with respect to foot-and-mouth disease, and prevent free trade in livestock and products of animal husbandry.

The complexity of the struggle against epizootic outbreaks of foot-and-mouth disease is complicated by the fact that some populations of the virus in the presence of susceptible animals spread in a relatively brief period of time over tremendous territories. This tendency to wide dissemination is linked with three characteristics of this virus: (a) an adequately high degree of preservation on environmental objects; (b) the ability to develop and induce the disease not only in one but several species of animals; and (c) various ways and methods of transmission.

The large number of epizootic outbreaks of foot-and-mouth disease which occurred in different parts of the world in the past and during this century did not pass unnoticed by science. They were objects of study by scientists of different institutes

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BOYKO, A. A., et al, Yashchur. Biologo-Ekologicheskiy Aspekt Problemy, 1971, 352 pp

and experimental stations. As a result much as been learned about foot-and-mouth disease virus, its morphological and biological properties, and its stability in the environment. Methods of eradication have been developed. Considerable knowledge has been gained on the pathogenesis of the disease, routes of the entry of the agent into the organism of susceptible animals, distribution of the virus throughout the organism, propagation and excretion into the environment. To some degree the immunogenesis of the virus has been decoded, and specific biological preparations against the disease have been proposed.

Considerable successes have been achieved in culturing foot-and-mouth disease virus in tissue cultures in vitro, and laboratory sensitive animals -- guinea pigs, suckling white mice, newborn rabbits, and others -- have been selected. Considerable improvement has been made in laboratory diagnosis of the disease, and particularly in methods of typing the virus. A complex of

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BOYKO, A. A., et al, Yashchur. Biologo-Ekologicheskii Aspekt Problemy, 1971, 352 pp

veterinary sanitation measures combined with specific drugs has been developed. All of this creates a real basis for the elimination of foot-and-mouth disease in the Soviet Union.

And still much about the virus remains unknown, and the prophylactic methods in use need further improvement. Efforts will continue until the problem of foot-and-mouth disease is solved. The primary source and main reservoir of foot-and-mouth disease virus in nature is the diseased farm animal.

Each new case in farm animals (cattle, swine, sheep, and goats) becomes a source of the virus in secretions and excretions, even prior to the appearance of clinical symptoms. Later, large quantities of the virus are disseminated with contents of the ruptured ulcers and with the epithelium from the mucous membranes and the skin.

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BOYKO, A. A., et al, Yashchur. Biologo-Ekologicheskii Aspekt Problemy, 1971, 352 pp

In massive contamination of bodies of water, fodder, pastures, wool, extremities of nonsusceptible domestic animals, objects used in the care of animals, and footwear and clothing of people, conditions are created in which the virus may survive, and under favorable conditions, be transmitted to other susceptible animals.

It has been experimentally established that an animal does not excrete a virus of identical activity in all stages of the infectious process. As the infection process begins to wane, the infectiousness of the secretions and excretions becomes attenuated and disappears. Nevertheless, there are considerable literature data on the virus carrier state in animals recovered from foot-and-mouth disease.

Despite the fact that at present the mechanism of transmission, periods, and significance of transmission of the virus are still under discussion, epizootic studies conducted by a number of

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authors showed that transmission of the virus by animals recovered from foot-and-mouth disease for several months (up to a year) to a farm with healthy animals is an indisputable fact.

The paramount role of diseased animals in the origin and course of epizootics of foot-and-mouth disease results not only from the active dissemination of the virus in the immediate environment, but also from the fact that the virus can be transported with infected products of the livestock breeding industry: meat, milk, wool, skin, etc. to areas far beyond epizootic foci.

With the use of modern equipment (refrigerators, refrigerated cars, and others) it is possible to create conditions for the prevention of product spoilage. However, these conditions are highly favorable also for the preservation of vital functions of the virus.

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USSR

BOYKO, A. A., et al, Yashchur. Biologo-Ekologicheskiy Aspekt Problemy, 1971, 352 pp

In 1961, during a serious outbreak of an epizootic of foot-and-mouth disease in Orenburg Oblast, infection of animals as a result of consumption of non-treated skimmed milk received from dairy plants was observed. Two special features regularly marked the development and spread of the disease in these cases. The first feature was the simultaneous outbreak of the disease at a number of farms receiving this milk; the second feature, the fact that young stock (young pigs and calves) fed the milk were stricken first, and older animals a few days later.

With modern means of transportation (railways, air transport, waterways) and extensive trade within the USSR and between countries, the agent of foot-and-mouth disease may appear within a short period of time at a considerable distance from its previous habitat. This circumstance required particular vigilance on the part of veterinary workers.

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USSR

BOYKO, A. A., et al, Yashchur. Biologo-Ekologicheskiiy Aspekt Problemy, 1971, 352 pp

The variety of ways in which foot-and-mouth disease can be transmitted has been confirmed by a number of reliably established cases, in which animals vaccinated with smallpox lymph and sera were infected with foot-and-mouth disease. Mohler and Rosenau, for instance, described an outbreak of foot-and-mouth disease in the United States in 1908 after vaccination with smallpox lymph received from Japan. An analogous outbreak in Hungary in 1917 was described by F. Gutira and R. Malek (1937) in Hungary. They reported also an outbreak of foot-and-mouth disease in Chicago in 1915 among hogs vaccinated with serum against hog cholera.

Rous (1956), anxious about conditions in Australia, which for a period of several decades had been free of foot-and-mouth disease, considered the real possibility of transmitting the agent of foot-and-mouth disease by a letter written by someone in contact with diseased animals and sent to a person caring for

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USSR

BOYKO, A. A., et al, Yashchur. Biologo-Ekologicheskiiy Aspekt Problemy, 1971, 352 pp

susceptible animals in Australia. Taking this possibility into consideration during an outbreak of foot-and-mouth disease in Great Britain, a recommendation was made in Ireland in 1967 that all New Year congratulatory cards received from Great Britain should be burned.

The literature contains a large number of reports on the spread of foot-and-mouth disease by fowl, horses, dogs, and cats, animals resistant to natural infection. There are also scattered data on the transmission of the agent by a large group of freely migrating organisms, such as insects, ticks, rodents, migrating birds, wild Artiodactyla, etc. Their participation in the development of foot-and-mouth disease is always suspected when the origin of an outbreak remains undetermined.

Considerable attention is also given to man's role in unconsciously spreading the disease.

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BOYKO, A. A., et al, Yashchur. Biologo-Ekologicheskii Aspekt Problemy, 1971, 352 pp

The sections of the book dealing with the agent of foot-and-mouth disease, its epizootic outbreaks, foot-and-mouth control measures in the USSR and foreign countries were written by A. A. Boyko. The sections concerning the role of wild ungulates, rodents, birds, insectivora, insects, ticks, cold-blooded animals, and Protozoa in spreading foot-and-mouth disease were written by F. S. Shulyak.

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Foot-and-Mouth Control Measures Implemented in the

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Bibliography

12/12

1/2 022 UNCLASSIFIED PROCESSING DATE--27NOV70
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CALLENDER AMPUTATION -U-
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CIRC ACCESSION NO--AP0137248

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE PROPERTIES OF THIGH STUMPS AFTER EPI METAPHYSARY AMPUTATIONS ARE STILL MATTERS FOR DISCUSSION FROM THE PROSTHETIC VIEWPOINT. THE AUTHOR HAS STUDIED SOME PROBLEMS OF PROSTHESIS FOLLOWING AMPUTATION AFTER GRITTI, CALLENDER BY ANALYSIS OF 1450 SPENT ORDER FORMS OF INVALIDS UNDERGOING PROSTHESIS AFTER THIGH AMPUTATION. TO STUDY THE RESULTS OF PROSTHESIS, 43 QUESTIONNAIRES WERE ANALYSED, 26 CLINICAL PATIENTS EXAMINED AND 18 PATIENTS INVESTIGATED TIEROENTGENOGRAPHICALLY. OF OBSERVED PATIENTS, A MARKED STUMP DEVIATION OUTWARDS WAS OBJECTIVELY ESTABLISHED IN 61, FREQUENTLY WITH PAINFUL AND WEIGHTBEARING INTO THE LATERAL WALL OF THE PROSTHESIS SOCKET. THE CAUSES OF THIS OCCURRENCE HAVE BEEN ANALYSED. BASING ON ANATOMIA BIOMECHANICAL ANALYSIS OF STUMP FEATURES AFTER AMPUTATIONS AT THESE LEVELS, PRACTICAL RECOMMENDATIONS FOR THE IMPROVEMENT OF PROSTHETICS ARE ADVANCED. FACILITY: LENINGRADSKOGO INSTITUTA PROTEZIROVANIYA.

UNCLASSIFIED

USSR

UDC 636.2:615.9

GLADENKO, I. N., MALININ, O. A., TRIFONOVA, T. K., SHULYAK, V. D., and
KARTASHEV, M. V., Ukrainian Scientific Research Institute of Experimental
Veterinary Medicine

"Toxic Properties of Sevin and Prophylaxis of Poisoning"

Moscow, Doklady Vsesoyuznoy Ordena Lenina Akademii Sel'skokhozyaystvennykh
Nauk Imeni V. I. Lenina, No 1, Jan 73, pp 38-39

Abstract: An aqueous suspension of sevin in a 0.1-0.85% concentration has satisfactory acaricidal activity on sheep treated in vats, without any toxic manifestations. Even the 0.1% dose resulted in total kill of the parasitic mites. Oral administration of sevin leads to a rapid absorption so that in 30 min it can be observed in considerable quantities in blood, all parenchymatic organs and skeletal muscles. Maximal concentration after 4-6 hrs is observed in liver and kidneys. After 4 days no traces of sevin can be found in any organs. Sevin exhibits no cumulative properties, being rapidly excreted from the organism. Sevin residues may be found in milk and meat. Milk from the cows exposed for three days to this agent should be checked for residual content of the chemical; no beef should be slaughtered within one week of the exposure to sevin.

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UNCLASSIFIED

PROCESSING DATE--13NOV70

1/2 016

TITLE--EPIDEMIOLOGICAL EFFICACY OF ANTHRAX STI VACCINE IN TADJIK SSR -U-

AUTHOR--SHULYAK, V.P.

COUNTRY OF INFO--USSR

SOURCE--ZHURNAL MIKROBIOLOGII, EPIDEMIOLOGII I IMMUNOBIOLOGII, 1970, NR 3,
PP 117-120

DATE PUBLISHED--70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--ANTHRAX VACCINE, EPIDEMIOLOGY, VACCINATION/(U)STI VACCINE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1990/1479

STEP NO--UR/0016/70/000/003/0117/0120

CIRC ACCESSION NO--AP0109539

UNCLASSIFIED

UNCLASSIFIED

PROCESSING DATE--13NOV70

2/2 016

CIRC ACCESSION NO--AP0109539

ABSTRACT/EXTRACT--(U) GP-0-

ABSTRACT. THE AUTHOR SUMS UP THE DATA ON EPIDEMIOLOGICAL EFFICACY OF STI VACCINE IN TADJIK SSR, WHICH WAS USED IN 1956-1966. SCARIFICATION METHOD WAS EMPLOYED FOR VACCINATION. THE INDEX OF EPIDEMIOLOGICAL EFFICACY OF STI VACCINE AVERAGED 11.9, BUT VARIED FROM 6.8 TO 14.9. CASES OF ANTHRAX IN THE VACCINATED WERE RECORDED NOT EARLIER THAN IN 11 TO 14 MONTHS FROM THE DATE OF VACCINATION. IN THE AUTHOR'S OPINION, IN THE TADJIK SSR PERIODS OF REPEATED VACCINATIONS WITH STI VACCINE OF PERSONS UNDER DANGER OF ANTHRAX INFECTION SHOULD BE REDUCED TO 10 INSTEAD OF 12 MONTHS.

UNCLASSIFIED

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USSR

UDC: 615.371:576.851.511/.036.8

SEULYAK, V.P., Republic Sanitary Epidemiological Station, Ministry of Health,
Tadzhik SSR

"The Epidemiological Effectiveness of STI Anthrax Vaccine in the Tadzhik SSR"
Moscow, Zhurnal Mikrobiologii, Epidemiologii i Immunobiologii, No 3, 1970,
pp 117-120

Abstract: Live STI anthrax vaccine was administered (scarification technique) to over 100,000 people (cattle herdsmen, meat packers, farm hands, etc.) in Tadzhikistan from 1956-1966. The vaccine had a marked prophylactic effect, since anthrax occurred 11.9 times less frequently among those vaccinated than among nonvaccinated individuals. The index of the epidemiological effectiveness of the inoculations varied with the type of anthrax focus (stationary focus, focus with many cases of the disease, with few cases) from 6.8 to 14.9. The vaccine provided swift protection, judging by the fact that no cases of the disease were reported among these vaccinated until 11-14 months after inoculation. There were no systematic reactions to the vaccine, and the only local effects were mild hyperemia and small scabs at the scarification site, which fell off in 2-4 days.

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1/2 012
UNCLASSIFIED
TITLE--INTERNAL CONVERSION COEFFICIENTS IN M SUBI-III SUBSHELLS OF AN ATOM
ZETA EQUALS 94 BY TAKING INTO CONSIDERATION GASPAR SCREENING BY USING
AUTHOR-(03)-BARISOGLIBSKIY, L.A., TRUSOV, V.F., SHULYAKOVSKIY, G.S.
PROCESSING DATE--30OCT70
COUNTRY OF INFO--USSR
SOURCE--VESTSI AKAD. NAVUK BELARUS. SSR, SER. FIZ. MAT. NAVUK 1970, (1),
101-6
DATE PUBLISHED-----70
SUBJECT AREAS--PHYSICS
TOPIC TAGS--ELECTRON TRANSITION, COULOMB INTERACTION, CHARGE DENSITY,
ELECTRON STRUCTURE, HEAVY NUCLEUS, ELECTRON INTERACTION
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1996/1493
STEP NO--UR/0428/70/000/001/0101/0106
CIRC ACCESSION NO--AP0118480
UNCLASSIFIED

2/2 012
 CIRC ACCESSION NO--AP0118480 UNCLASSIFIED PROCESSING DATE--30OCT70
 ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. INTERNAL CONVERSION ON THE M SHELL
 OF AN ATOM IS A PROCESS IN WHICH SCREENING OF THE NUCLEUS BY E PLAYS AN
 IMPORTANT ROLE. COEFFS. OF INTERNAL CONVERSION (CIC) CALCD. BY TAKING
 THIS SCREENING INTO CONSIDERATION HAD VALUES 50-200PERCENT LOWER THAN
 THOSE CALCD. ON THE ASSUMPTION OF AN UNSCREENED NUCLEUS AND AGREED WELL
 WITH EXPTL. RESULTS. IN EARLIER WORK THE METHOD OF CALCG. SCREENING
 ACCORDING TO GASPAR WITH SEMIEMPIRICAL CORRECTIONS WAS APPLIED BY T., ET
 AL. 1968, IN THE CALCN. OF CIC VALUES FOR THE M SHELL OF AN ATOM WITH
 ZETA EQUALS 65. IN THIS INSTANCE, THE SAME METHOD WITH SOME
 MODIFICATIONS WAS APPLIED IN THE CALCN. OF CIC FOR AN ATOM WITH ZETA
 EQUALS 94. ELEC. AND MAGNETIC CIC FOR THE SUBSHELLS M SUBI, M SUBII,
 AND M SUBIII WERE CALCD. THE RELATIONS BETWEEN THE CIC VALUES AND
 TRANSITION ENERGIES; THOSE BETWEEN CIC RATIOS M SUBI-M SUBII, M SUBII-M
 SUBIII AND TRANSITIONS ENERGIES; AND THE EFFECTIVE PARAMETERS SIGMA
 SUBEFF EQUALS ZETA MINUS ZETA SUBEFF (CALCD. BY RELATING DETD. VALUES OF
 CIC TO THOSE LISTED IN M. E. ROSES'S TABLES) WERE DERIVED.
 FACILITY: BELORUSS. GOS. UNIV. IM. LENINA, MINSK, USSR.

UNCLASSIFIED

USSR

UDC 621.373.826:550.5

GERMAN, A. I., SHULYAKOVSKIY, G. Ye., CHAYANOVA, E. A., GULYAYEV, G. A., ZHURAVLEV, V. F., ZAKATOVA, T. M., and KNYAZ'KIN, V. V.

"Investigating the Effect of the Atmosphere on the Propagation of Coherent Radiation With the Wavelength of $\lambda = 10.6$ Microns"

Moscow, V sb. X Vses. konf. po rasprostr. radiovoln. Tezisy dokl. (Tenth All-Union Conference on the Propagation of Radio Waves; Report Theses--collection of works) "Nauka," 1972, pp 179-185 (from RZh--Radiotekhnika, No 10, 1972, Abstract No 10P381)

Translation: Results are given of experiments on the determination of the coefficient of attenuation in coherent measurements (wave of 10.6 microns) as it passes over the uniform ground surface in a range of about 8 km. The radiation source was a stabilized laser on an OKG-15 base, operating in single mode with an output power of 1.2-1.5 W. The radiation was modulated with a 1080 Hz frequency. A diagram of the relative angular distribution of the radiation was given, which permitted the divergence angle of the radiation and the zone of maximum signal level to be determined. All

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GERMAN, A. I., et al., V sb. X Vses. konf. po rasprostr. radiovoln. Tezisy dokl., "Nauka," 1972, pp 179-183

further measurements were made in this zone. The value of the attenuation factor is within the limits of $0.03-0.08 \text{ km}^{-1}$ for clear weather, in the interval of $0.08-0.2 \text{ km}^{-1}$ for light fog and drizzles, and in the range of $0.5-0.6 \text{ km}$ for heavy downpours. The proposed method for relative measurements of the attenuation factor gives a measurement error one-half that obtained in the absolute method.

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1/2 014

UNCLASSIFIED

PROCESSING DATE--27NOV70

TITLE--PREPARATION OF ACETYLENE AND ETHYLENE BY ELECTROCRACKING IN A
DIVIDED CONDENSED DISCHARGE -U-

AUTHOR--(04)-MOROZOV, L.G., SHULYAR, B.N., BUVALKINA, L.A., SOKOLSKIY, D.V.

COUNTRY OF INFO--USSR

SOURCE--IZV. AKAD. NAUK KAZ. SSR, SER. S KHIM. 1970, 20(1), 85-6

DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--ACETYLENE, ETHYLENE, DIESEL FUEL, KEROSENE, AROMATIC
HYDROCARBON, ELECTROCHEMICAL REACTION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRA--2000/2210

STEP NO--UR/0360/70/020/001/0085/0086

CIRC ACCESSION NO--AP0125790

UNCLASSIFIED

UNCLASSIFIED

PROCESSING DATE--27NOV70

2/2 014
CIRC ACCESSION NO--AP0125790
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. BY ADDING MOBILE C PARTICLES TO
HYDROCARBONS TO DIVIDE THE CONDENSED DISCHARGE DURING ELECTROCRACKING,
PRODUCTIVITY WAS INCREASED 5 TO 6 FOLD AS A RESULT OF THE INCREASED NO.
OF DISCHARGE SITES AND RAPID QUENCHING. ELECTROCRACKING PRODUCTIVITY
FOR N PARAFFINS, NAPHTHENIC HYDROCARBONS, AND DIESEL FUEL AND KEROSENE
FRACTIONS WAS 23-5 L.-HR AND FOR AROMATIC HYDROCARBONS WAS 20-2 L.-HR.
ENERGY CONSUMPTION WAS 5.0 KW-HR-M PRIME3 CRACKING GAS AND 7.5 KW-R-M
PRIME3 UNSATD. HYDROCARBON GAS PRODUCTS. C SUB2 H SUB4 AND H IN 34-40
AND 25-9PERCENT YIELDS AND C SUB2 H SUB2 WERE THE MAIN PRODUCTS FROM C
SUB6-15 N, ALKANES, BUT H CONTENT WAS HIGHER (SMALLER THAN OR EQUAL TO
60PERCENT) IN THE PRODUCTS FROM NAPHTHENIC AND AROMATIC HYDROCARBONS.
FACILITY: KAZ. GOS. UNIV. IM. KIROVA, ALMA-ATA, USSR.

UNCLASSIFIED

1/2 018 UNCLASSIFIED PROCESSING DATE--30OCT70
TITLE--ELECTROCRACKING OF LIQUID PETROLEUM HYDROCARBONS IN MICRODISCHARGES
-U-
AUTHOR--(04)-MGROZGV, L.G., SHULYAR, B.N., BUVALKINA, L.A., SOKOLSKIY, D.V.
COUNTRY OF INFO--USSR
SOURCE--IZV. AKAD. NAUK KAZ. SSR, SER. KHIM. 1970, 20(1), 70-4
DATE PUBLISHED--70
SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--ETHYLENE, PETROLEUM PRODUCT, OCTANE, ACETYLENE, CHEMICAL
REACTION RATE, CATALYTIC CRACKING, ELECTROCHEMISTRY
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--2000/2097 STEP NO--UR/0360/70/020/001/0070/0074
CIRC ACCESSION NO--AP0125681
UNCLASSIFIED

2/2 018

UNCLASSIFIED

PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0125681

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. IN THE ELECTROCRACKING OF N OCTANE IN A 25 CM PRIME3 QUARTZ GLASS RECTANGULAR REACTOR ON OPPOSITE SIDES OF WHICH DISK ELECTRODES OCCUPIED A HORIZONTAL POSITION, HYDROCARBON WAS ADMITTED CONTINUOUSLY THROUGH A CENTRAL OPENING IN THE ELECTRODES WHILE AN ELEC. VIBRATOR WAS USED TO INSURE MAX. MICRODISCHARGES ON MOBILE C PARTICLES, 0.25-0.3 MM IN DIAM. MAX. C SUB2 H SUB2 CONTENT (30-40PERCENT) WAS OBSD. WHEN THE WT. OF C PARTICLES WAS 1-1.8 G AND THE APPLIED VOLTAGE WAS 3-5 KV. C SUB2 H SUB4 CONTENT WAS MAX. (37.0PERCENT) WHEN THE PARTICLE SIZE WAS 1.0 MM AND THE APPLIED VOLTAGE WAS 1 KV, BUT WAS STILL HIGH (25-30PERCENT) AT VOLTAGES OF 1-1.5 KV EVEN WHEN THE PARTICLE SIZE WAS 2.0-3.0 MM. SELECTIVITY FOR C SUB2 H SUB2 WAS MAX. (67PERCENT) AT A SPECIFIC ENERGY OF 11.0 KW-HR-M PRIME3 WHEN 1.0 G OF C PARTICLES 3.0 MM IN DIAM. WAS USED AND WAS STILL HIGH (60PERCENT) WHEN 1.4 G C WAS TAKEN IN ORDER TO REDUCE SPECIFIC ENERGY TO THE MIN. (6.5 KW-HR-M PRIME3) FOR PARTICLES OF THIS SIZE, AND WAS 61PERCENT WHEN 1.0 G C PARTICLES, 0.25 MM IN DIAM. WAS USED AND SPECIFIC ENERGY WAS MIN. (2.4 KW-HR-M PRIME3). FACILITY: KAZ. GOS. UNIV. IM. KIROVA, ALMA-ATA, USSR.

UNCLASSIFIED

USSR

UDC 547.26'118

PUDOVIK, A. N., PUDOVIK, M. A., SHULYNDINA, O. S., and NAGAYEVA, KH. KH., Institute of Organic and Physical Chemistry imeni A. Ye. Arbuzov, Academy of Sciences USSR

"2-Substituted N-Phenyl(benzyl)-1,3,2-oxaazaphospholanes"

Leningrad, Zhurnal Obshchey Khimii, Vol 40, No 7, Jul 70, pp 1477-1480

Abstract: The interaction of phosphorus trichloride with β -phenyl-(benzyl)aminoethanol gives 2-chloro-N-phenyl(benzyl)-1,3,2-oxaazaphospholane. These acid chlorides readily react with alcohols, secondary amines to form corresponding amides and esters. The same products are obtained by a transesterification reaction -- transamidation of some trivalent phosphorus acid derivatives. Thus, heating of hexaethyltri-aminophosphine with β -phenylaminoethanol in a benzene solution gives 2-diethylamino-N-phenyl-1,3,2-oxaazaphospholane. The latter on heating with alcohol readily becomes 2-ethoxy-N-phenyl-1,3,2-oxaazaphospholane.

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1/2 026 UNCLASSIFIED PROCESSING DATE--18SEP70
TITLE--REACTION OF 1,3,2, OXAAZAPHOSPHOLANES WITH ACETIC ANHYDRIDE -U-
AUTHOR--(03)--PUDOVIK, A.N., PUDOVIK, H.A., SHULYNDINA, O.S.
COUNTRY OF INFO--USSR
SOURCE--ZH. OBSHCH. KHIM. 1970, 40(2), 501-2
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--ACETIC ANHYDRIDE, EXOTHERMIC REACTION, HETEROCYCLIC NITROGEN
COMPOUND, ORGANIC PHOSPHORUS COMPOUND, HETEROCYCLIC OXYGEN COMPOUND, IR
SPECTRUM, NMR SPECTRUM
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1985/1406 STEP NO--UR/0079/70/040/002/0501/0502
CIRC ACCESSION NO--AP0101496
UNCLASSIFIED

2/2 026

UNCLASSIFIED

PROCESSING DATE--18SEP70

CIRC ACCESSION NO--AP0101496

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. ADDING AC SUB2 O TO I IN C SUB6 H SUB6 (EXOTHERM) (70 TO 80DEGREES MAX.) GAVE AFTER 12 HR 90PERCENT AC NMECH SUB2 CHMEDP(OET)(OAC), B SUBO TIME SUBO01 115 TO 180DEGREES, N PRIME20 SUBD 1.4592, D PRIME20 1.1177. THE PRODUCT ADDED S AND REACTED VIGOROUSLY WITH CCL SUB3 CHO. SIMILAR REACTION OF II WITH AC SUB2 O REQUIRED REFLUXING 1 HR IN C SUB6 H SUB6, TO GIVE ACNPHCH SUB2 CH SUB2 OP (OET)(OAC), WHICH ON ATTEMPTED DISTN. UNDERWENT DISPROPORTIONATION AND GAVE 47PERCENT ACNPHCH SUB2 CH SUB2 OAC, B SUBO TIMES SUBO5 116 TO 17DEGREES, 1.5158, 1.1205. IR AND NMR SPECTRAL DATA WERE GIVEN.

UNCLASSIFIED

USSR

UDC 547.26'118

PUDOVIK, A. N., PUDOVIK, M. A., and SHILYNDINA, O. S., Institute of Organic and Physical Chemistry imeni A. Ye. Arbutov, Academy of Sciences USSR, Kazan'

"Reaction of 1,3,2-Oxaazaphospholanes With Acetic Anhydride"

Leningrad, Zhurnal Obshchey Khimii, Vol 40, No 2, Feb 70, pp 501-502

Abstract: It is shown that ring substituted and unsubstituted N-alkyl-1,3,2-oxaazaphospholanes react under mild conditions with acetic anhydride resulting in ring cleavage on the nitrogen-phosphorus bond and the formation of corresponding dialkyl acetylphosphites in high yield.

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USSR

UDC 621.372.061:538.56

GONOKHOV, L. A., ZAVALISHIN, M. A., SHULZHENKO, K. M.

"Discrete Phase Band Oscillator"

Tr. Tomskogo in-ta radioelektron. i elektron. tekhn. (Works of Tomsk Radioelectronics and Electronic Engineering Institute), No 16, 1970, pp 9-10, 11-12 and 13, (from RZh-Radiotekhnika, No 8, Aug 70, Abstract No 8A175)

Translation: When developing phase engineering equipment operating at 1-100 megahertz, the equipment for reproduction of the phase difference with high accuracy is used. This article contains a description of a discrete phase band oscillator permitting us to obtain two amplitude-regulated coherent sinusoidal voltages with a discretely controlled phase difference between them. The instrument includes two fixed-frequency 18-megahertz and 32-megahertz generators and a frequency converter. The discrete phase shifts are obtained by means of electronically controlled frequency dividers with several stable states fed from a common quartz oscillator. The output frequencies of the regenerative dividers are added by mixers with corresponding addition of the phase signal. The control of the output phase of the divider is achieved by the effect of short pulses on varicaps included in the low-frequency circuits. This permits manual and automatic phase changing using an external oscillator. The phase difference is 1/2

UDC 616.988.75(A2)

USSR

KETILADZE, YE. S., KRYAZEVA, L. D., KRYLOV, V. F., ALEKSEYEVA, A. A.,
POLYAKOVA, T. G., TSAREVA, R. G., LITVIN, L. L., and ~~SHIL'ZHEV, T. V.~~
Clinical Department, Institute of Virology imeni D. I. Ivanovskiy, Academy
of Medical Sciences, USSR; and Municipal Infectious Disease Hospital No 82

"Clinical Picture and Some Aspects of the Pathogenesis of Influenza Caused
by Virus A2 (Hong-Kong)"

Moscow, Sovetskaya Meditsina, No 7, 71, pp 115-120

Abstract: The article reports findings of a study of 402 influenza patients
between 17 and 84 years of age, observed during the Moscow influenza epidemic
of January and February 1969. The subjects included both those observed in
the clinic and others in military units. The disease showed all the classical
traits of influenza infection: acute beginning; rapid rise in temperature
(39°C and higher in 88% of the civilian and 26% of the military cases); and
swiftly increasing signs of toxicoxis. Almost all patients showed headache,
prostration, pains in the limbs, chill, dizziness, and vomiting. More severe
cases showed changes in the vascular and central nervous systems: delirium,
brief loss of consciousness, syncope, convulsions, and meningeal symptoms.
Cyanosis of the lips and oral mucous membranes, microscopic hemorrhages of the

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KETILADZE, YE. S., et al., Sovetskaya Meditsina, No 7, 71, pp 115-120

soft palate, and nosebleeds were observed in relatively small percentages of cases. A table shows the relative frequency of various symptoms in successive influenza epidemics from 1959 through 1969. However, these figures show no consistent pattern. As is clear from the data presented, the clinical picture of A2 (Hong-Kong) influenza does not differ in the character of individual symptoms from the A2 influenza of previous years. However, in the degree of manifestation of toxicosis and the number of severe cases among patients hospitalized in the clinic, the influenza in 1969 was more severe than in 1967, but less so than in 1959. Patients in military units generally showed a less severe course. Older patients, especially those with chronic respiratory disorders, showed intensification of these conditions.

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